

CLAIM

1. A frequency measurement circuit for measuring a frequency of an input signal, comprising:

5 a frequency measurement unit for counting a reference clock during a counting period having a predetermined number of waves of the input signal, wherein the frequency measurement unit counts the reference clock by assigning a lighter weight to the counts at a starting time and ending time of the counting
10 period, compared with the other times.

2. The frequency measurement circuit according to claim 1, wherein the amount of weighting is the minimum value at the time when the counting period starts and at the time when the
15 counting period ends, the amount increases as the counting operation progresses away from the starting time, and the amount decreases as the counting operation gets near to the ending time.

3. The frequency measurement circuit according to claim
20 1, wherein the amount of weighting is a positive number or a negative number, the absolute value of the amount of weighting becomes the minimum value at the time when the counting period starts and at the time when the counting period ends, the absolute value increases as the counting operation progresses away from
25 the starting time, and the absolute value decreases as the counting operation gets near to the end time.

4. The frequency measurement circuit according to claim 1, wherein the frequency measurement unit includes: a select signal generator circuit for counting a predetermined number of waves of the input signal to generate a select signal during the counting period; a select circuit for allowing a supply of the reference clock in response to select signal; and a reference clock frequency measurement circuit for counting the reference clock supplied from the select circuit in the basis of the amount of weighting.

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5. The frequency measurement circuit according to claim 1, wherein the amount of weighting increases by 1 at every cycle of the input signal as the counting operation progresses away from the starting time, reaches to at least a quotient of the lowest common multiple of t_m and t_B divided by t_m , where t_m is the cycle of the input signal and t_B is the cycle of the reference clock, maintains said quotient for one or plural cycles of the input signal, and decreases by 1 at every cycle of the input signal as the counting operation progresses to the end time.

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6. The frequency measurement circuit according to claim 1, wherein the input signal is a clock signal, and wherein the counting period starts from the rising edge or the falling edge of the input clock signal and ends at the rising edge or the falling edge of the input clock signal respectively.

7. The frequency measurement circuit according to claim

6, wherein the predetermined number of waves of the input signal is the number of the rising edges, the number of the falling edges or the number of rising edges, the number of the falling edges or the number of rising and falling edges of the input clock signal.

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